Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. 34. (Cancelled)
- 35. (New) A modified pokeweed antiviral protein (MPAP) comprising substitution of one or more amino acids positioned at least 10 angstroms from Arg179 of wild-type PAP (SEQ ID NO:1), wherein said substitution of one or more amino acids modifies at least one hydrophobic contact between adjacent alpha-helicies.
- 36. (New) The MPAP of claim 35, comprising substitution of one or more amino acids within α helix 4-loop-α helix 5 region.
- 37. (New) The MPAP of claim 36, comprising substitution of one or more of the following amino acids: Tyr76, Lys151, Ile152, Phe158, Thr162, or Thr166.
- 38. (New) The MPAP of claim 35, wherein amino acid Lys151 is substituted.
- 39. (New) The MPAP of claim 35, comprising the substitution Lys151Ala.
- 40. (New) The MPAP of claim 35, wherein amino acid Ile152 is substituted.
- 41. (New) The MPAP of claim 35, comprising the substitution Ile152Ala.

- 42. (New) The MPAP of claim 35, comprising one or more substitution in a C-terminal portion of α helix 6 or within a helix adjacent to the C-terminal portion of α helix 6.
- 43. (New) The MPAP of claim 42, comprising substitution of one or more of the following amino acids: Ile13, Tyr16, Ile142, Lys188, Phe191, or Asp192.
- 44. (New) The MPAP of claim 35, comprising substitution of amino acid Phe191.
- 45. (New) The MPAP of claim 35, comprising the substitution Phe191Ala.
- 46. (New) The MPAP of claim 35, comprising substitution of amino acid Asp192.
- 47. (New) The MPAP of claim 35, comprising the substitution Asp192Gly.
- 48. (New) The MPAP of claim 35, wherein the substitution comprises Lys151Ala, Ile152Ala, Phe191Ala, Asp192Gly, or combinations thereof.
- 49. (New) The MPAP of claim 48, wherein the substitution comprises Lys151Ala and Ile152Ala.
- 50. (New) The MPAP of claim 35, wherein the substitution comprises Phe191Ala and Asp192Gly.

51. (New) A modified pokeweed antiviral protein (MPAP) comprising substitution of one or more amino acids positioned at least 10 angstroms distance from reference amino acid Arg179 of wild-type PAP (SEQ ID NO:1), wherein said substitution modifies hydrophobic packing between adjacent alpha-helicies, such that MPAP-mediated depurination of viral RNA is greater than MPAP-mediated depurination of ribosomal RNA.

Special Section

- 52. (New) The MPAP of claim 51, wherein the viral RNA comprises retroviral RNA.
- 53. (New) The MPAP of claim 51, wherein the viral RNA comprises HIV-1 RNA.
- 54. (New) The MPAP of claim 51, wherein the viral RNA comprises RNA of a drug resistant HIV-1 strain.
- 55. (New) The MPAP of claim 51, wherein a ratio of MPAP-mediated depurination of viral RNA to PAP-mediated depurination of ribosomal RNA is greater than 5 to 1.
- 56. (New) A modified pokeweed antiviral protein (MPAP) comprising substitution of one or more amino acids positioned at least 10 angstroms distance from Arg179 of wild-type PAP (SEQ ID NO:1), wherein said substitution modifies hydrophobic packing between adjacent alpha-helicies, such that MPAP-mediated depurination of viral RNA is increased relative to that mediated by wild-type PAP.

- 57. (New) The MPAP of claim 56, wherein the viral RNA comprises retroviral RNA.
- 58. (New) The MPAP of claim 57, wherein the viral RNA comprises HIV-1 RNA.
- 59. (New) The MPAP of claim 57, wherein the viral RNA comprises RNA of a drug resistant HIV-1 strain.
- 60. (New) The MPAP of claim 57, wherein a ratio of MPAP-mediated depurination of viral RNA to wild-type PAP-mediated depurination of viral RNA is greater than 2 to 1.
- 61. (New) A composition comprising MPAP according to claim 35 and a pharmaceutically acceptable carrier.
- 62. (New) The composition of claim 61, further comprising one or more nucleoside analog reverse transcriptase inhibitor (NRTI), non-nucleoside analog reverse transcriptase inhibitor (NNRTI), protease inhibitor (PI), or combinations thereof.
- 63. (New) A method for inhibiting viral replication comprising contacting a virus with MPAP according to claim 35.
- 64. (New) The method of claim 63, wherein the virus comprises human immunodeficiency virus (HIV).

- 65. (New) The method of claim 63, wherein the virus comprises HIV-1 virus.
- 66. (New) The method of claim 63, wherein the virus comprises a drug resistant HIV-1 virus.
- 67. (New) The method of claim 63, wherein virus comprises a drug resistant HIV-1 virus resistant to one or more of the following drugs: nucleoside analog, non-nucleoside analog, or protease inhibitor.
- 68. (New) A method for inducing depurination of viral RNA comprising contacting a virus with MPAP according to claim 35.
- 69. (New) A method for treating viral infection in a subject in need thereof, comprising administering to the subject MPAP according to claim 35.
- 70. (New) Use of MPAP according to claim 35 for inhibiting viral replication.
- 71. (New) Use of MPAP according to claim 35 for inducing depurination of viral RNA.
- 72. (New) Use of a MPAP according to claim 35 for manufacture of a medicament for treating viral infection.